

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of: Huang et al.

CASE NO.: CL1943 US NA

APPLICATION NO.: 10/630,248

GROUP ART UNIT: UNKNOWN

FILED: JULY 30, 2003

EXAMINER: UNKNOWN

FOR: ETHYLENE GLYCOL MONOLAYER PROTECTED NANOPARTICLES

**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In compliance with 37 CFR 1.97 and 1.98, Applicants bring to the attention of the U.S. Patent and Trademark Office information listed on the enclosed PTO/SB/08A and PTO/SB/08B. A copy of the information is also enclosed.

For the Examiner's convenience Applicants additionally enclose a CD rom containing a copy of PTO 1449 in MS Word format containing hyperlinks to the full text of all cited references.

Should any fee be required in connection with the filing of this Information Disclosure Statement, please charge such fee to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,

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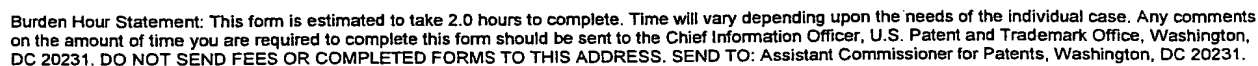
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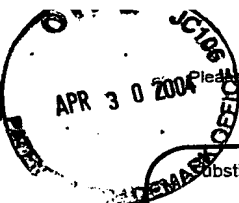
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STATEMENT BY APPLICANT**

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Sheet 2 of 2

**Complete if Known**

Application Number	10/630,248
Filing Date	July 30, 2003
First Named Inventor	Huang et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	CL1943 US NA

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Prime et al., Self-Assembled Organic Monolayers: Model Systems for Studying Adsorption of Proteins at Surfaces, Science, 1991, 252, 5009, 1164-1167	
		Lahiri et al., A Strategy for the Generation of Surfaces Presenting Ligands for Studies of Binding Based on an Active Ester as a Common Reactive Intermediate: A Surface Plasmon Resonance Study, Analytical Chemistry, 1999, February 15, 71(4), 777-790	
		Templeton et al., Redox and Fluorophore Functionalization of Water-Soluble, Tiopronin-Protected Gold Clusters, JACS, 1999, 121, PPG 7081-7089	
		Foos et al., Thiol-Terminated Di-, Tri-, and tetraethylene Oxide Functionalized Gold Nanoparticles: A Water-Soluble, Charge-Neutral Cluster, Chem. Mater. 2002, 14, pp. 2401-2408	
		Templeton et al., Water-Soluble, Isolable Gold Clusters Protected by Tiopronin and Coenzyme a Monolayers, Langmuir 15: 66-76, 1999	
		Chen et al., Poly(N-vinylisobutyramide)-stabilized platinum nanoparticles; synthesis and temperature-responsive behavior in aqueous solution. Colloids and Surfaces A 169: 107-116, 2000	
		Wueffling et al., Nanometer Gold Clusters Protected by Surface-Bound Monolayers of Thiolated Poly(ethylene glycol), Polymer Electrolyte, J. Am. Chem. Soc. 120* 12696-12697, 1998	
		Chan et al., Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection, Science, 281: pp. 2016-2018, 1998	
		Mitchell et al., Programmed Assembly of DNA Functionalized Quantum Dots, J. Am. Chem. Soc. 121: 8122-8123, 1999	
		Napper, Steric Stabilization, J. Colloid. Interface. Sci 58: 390-407, 1977	
		Prime et al., Adsorption of Proteins onto Surfaces Containing End-Attached Oligo(ethylene oxide): A Model System Using Self-Assembled Monolayers, AJ. Am. Chem. Soc. 1993, 115, 10714 -10721	
		Brust et al., Synthesis of Thiol-derivatised Gold Nanoparticles in a Two-phase Liquid-Liquid System, Department of Chemistry, University of Liverpool, UK	
		Zhang et al., Proteins and cells on PEG immobilized silicon surfaces, Biomaterials 19, 1998, 953-960,	
		Otsuka et al., Quantitative and Reversible Lectin-Induced Association of Gold Nanoparticles Modified with $\alpha$ -Lactosyl- $\omega$ -mercapto-poly(ethylene glycol), J. Am. Chem. Soc. 2001, 123, 8226-8230	
		Snow et al., Self-assembly of gold nanoclusters on micro- and nanoelectronic substrates, J. Mater. Chem., 2002, 12, 1222-1230	
		Roberts et al., Using Mixed Self-Assembled Monolayers Presenting RGD and (EG) <sub>3</sub> OH Groups to Characterize Long-Term Attachment of Bovine Capillary Endothelial Cells to Surfaces,	

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